PRIMARY REPAIR OF INJURIES TO THE PAROTID DUCT

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IN view of the large amount of space that is devoted in the literature to the treatment of salivary duct fistula it is remarkable that the immediate repair of the divided duct receives such scant notice. If in connection with salivary duct injuries primary repair is mentioned at all, it is in the form of advice to search for the divided ends and to unite them with catgut.

It is possible that the lack of attention to painstaking methods of accomplishing this primary union may be responsible for the unnecessarily large proportion of cases which develop a fistula and require subsequent operation or operations for its relief.

The course of the duct, which is ordinarily described as consisting of three portions,—glandular, masseteric and buccal—lies along a line drawn upon the skin of the cheek from the lower border of the tragus to a point midway between the nostril and the red margin of the lip. The duct is about two and one-half inches long and ends opposite the second upper molar tooth. In all deeper injuries which cross this region one must suspect damage to the duct, a condition which is not difficult to establish.

Konig believes that primary union may occur spontaneously but such an outcome must be exceptional.

It goes without saying that primary repair should always be attempted. In Choyce's widely read textbook the author is not optimistic as to the outcome: "This operation," he writes, "is one of extreme difficulty in view of the diminutive circumference of the duct, and in my opinion, primary union rarely if ever occurs."

In the event of failure there develops a salivary fistula. This condition, while not a dangerous one, is extremely burdensome, necessitating a constant wiping of the cheek, and frequently leads to a very troublesome eczema. The quantity of saliva secreted may be very considerable. Duphenix collected seventy grammes from a salivary fistula in a quarter of an hour, and Jobert reports a case where several cupfuls were passed in the course of twenty-four hours.

Many methods have been devised for the treatment of these fistulas, aiming either at—

(1) A restoration of the normal aqueduct, or

(2) The conversion of an external into an internal fistula.

Fistula of the buccal portion presents a much simpler problem than the masseteric, for in the former the second method is usually feasible. The masseteric cases are more intractable.

Delarue, in 1895, collected twenty-six different operations devised up to that time, since when other methods have been described. These procedures are associated with the names, among others, of Nicoladoni, Von Langenbeck, De Guise, Weber, Eisendrath, Wyeth, Desault, de Roy, Richelot, Kaufmann, Braun, Trélat, Pearce Gould, Leriche, Jianu, Ferrarini, Tillmanns, and Crouse.

FIG. 1.—Wound of masseteric portion of duct. Catgut strand in lumen serving as dowel.

In a multitude of councillors there is wisdom, but in a multiplicity of ways and means there is seldom a royal road. Once a fistula has developed no method aiming at its cure seems to guarantee success, and as a counsel of despair not a few have in obstinate cases advocated complete excision of the parotid gland. From all

of which it will be apparent how much to be desired is a successful primary repair.

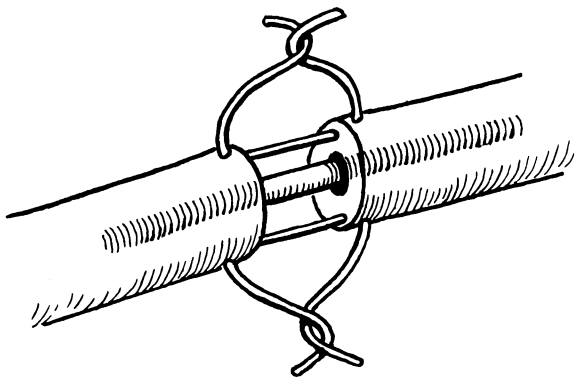

FIG. 2.—Severed ends of parotid duct. Catgut in lumen serving as a dowel. Sutures placed in sheath.

In two cases of division of the masseteric or middle portion of the duct the method described below was employed. In both instances primary union was obtained, with no evidence of leakage at the suture line and no subsequent swelling of the parotid gland.

Case 1.—Male, aged twenty-eight, wounded on the left cheek by sharp instrument which cut the duct. Admitted to the Montreal General Hospital, Nov. 18, 1921. Operation by Dr. H. M. Young four hours after injury.

Case 2.—Male, aged nine, sustained a lacerated wound of the left cheek by being thrown against a broken windshield in an automobile collision. The duct was divided. Admitted to the Montreal General Hospital, November 10, 1922. Operation by Dr. F. J. Tees four hours after injury.

The severed ends of the duct were in the two instances readily found, and while in each the lumen was too small to admit the finest probe there was no difficulty in inserting a short length of stiff iodine catgut, No. 1, into the distal and proximal portions of the duct. This acting as a dowel served to keep the lumen of the divided ends in apposition and two fine catgut sutures through the sheaths maintained the coaptation.

In the first case the end of the catgut was allowed to project through the orifice of the duct into the buccal cavity, but this was not done in the second case and is not considered necessary or advisable. Plain catgut is apparently digested by the saliva and subsequently disappears.

The method is illustrated in the accompanying diagrams, and is recommended for trial in the hope that it will materially reduce the number of cases of this type of injury requiring secondary operative measures.

Clinical and Experimental Renal Deficiency.—The experimental and clinical studies made by Frederick M. Allen, Rudolph Scharf and Harry Lundin, Morristown, N. J., seem to place diabetes and kidney disease on much the same basis. The pathology of both is composed of a primary and a secondary factor. The primary factor is infection or intoxication, producing the initial lesions. The secondary factor consists in a functional overstrain of the damaged organ. The hydropic degeneration of islands of Langerhans is explainable on this ground and no other. Likewise the degenerative changes in the renal epithelium, which have been mysterious in cause and character, can probably in large measure receive the same functional explanation. Vascular disease or other local peculiarities may make the conditions less clear-cut in the kidneys than in the pancreatic islands. One difference must be recognized in the fact that functional rest of the pancreatic islands clears up glycosuria, while functional rest of the kidneys does not usually clear up albumin and casts. On the other hand, it is also known that albumin and casts are not trustworthy signs of the progressiveness of a case. With allowance for certain inevitable consequences of existing organic and vascular damage, the recognition of the class of secondary anatomic lesions due to functional overstrain should represent a valuable advance in the study of diseases of the kidneys. The clinical application is also important; namely, that for the most part hypertension and nephritis are not inherently progressive but are permanently controllable by adequate sparing of function.—*Jour. Am. Med. Ass.*, Nov. 28, 1925.